MARK HODKINSON PTY LTD

Inspection of Building 17 Eildon Road St Kilda



Prepared by

Mark Hodkinson

Mark Hodkinson Pty Ltd

6th December 2021

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Consulting Structural Engineers

Mr Mostafa Ghafouri Dastjerdi

City of Port Phillip 99a Carlisle Street St Kilda 3182

Dear Mostafa,

Re: Inspection of Building
17 Eildon Road

St Kilda

We are writing to report on our structural engineering inspection of the Eildon Road Childcare & Kindergarten building at 17 Eildon Road St Kilda conducted on 3rd and 11th November 2021.

1 Introduction

The Childcare & Kindergarten building is a two storey predominantly brickwork building c1920s-1930s that appears to have been altered and extended in the 1980s. Refer to Appendix A for Council's Ground and First Floor plans, and to Appendix B for photographs of the exterior and interior of the building. Note that we did not take photographs of the Ground Floor rooms that were in use for privacy reasons.

2 Brief

The purpose of the inspection was to report on the structural condition of the accessible areas of the building.

3 Inspections

The interior and exterior of the building were inspected from the ground and first floor levels, the Ground Floor sub-floor structure was inspected from traps cut in the flooring, and the pitched roof structure was inspected from the main roof space accessible from the Hallway manhole, noting that the skillion roof structures were not inspected.

Our inspection of the building revealed the following:-

- 3.1 The sub-floor structure of the Baby's Room that was able to be inspected from the trap cut in the western room flooring revealed that the hardwood (HW) joists appeared to be in good condition and that the HW bearers had been partially (?) restumped with concrete stumps. At the edge of the trap a section of timber has split off the side of the bearer for no apparent reason. The original HW stumps that were visible had water staining just above ground level which is generally an indication of dry rot below the ground level. Refer to Photographs 1 to 3 Appendix C.
- 3.2 The sub-floor structure of the Toddler's Room that was able to be inspected from the two traps cut in the flooring revealed that the sub-floor construction was similar to that of the Baby's Room with the exception that the bearers have been restumped with 'new' HW timber stumps and both the original and new stumps have water staining just above the ground level. Refer to Photographs 4 to 7 Appendix C.
- 3.3 The sub-floor structure of the Kinder Room that was able to be inspected from the trap cut in the flooring revealed that the sub-floor construction was similar to that of the Baby's and Toddler's Rooms, with the exception that the bearers do not appear to have been restumped, Similarly the HW stumps have water staining just above the ground level. There was extensive mould on the base brickwork which is generally an indication of poor sub-floor ventilation, and there was building debris strewn and piled up within the sub-floor space. Refer to Photographs 8 to 11 Appendix C.
- 3.4 The original and later roof and ceiling framing that were visible from the roof space accessible from the ceiling manhole revealed the following:-
 - The roof and ceiling framing is well constructed. Refer to Photographs 12 and 13 Appendix C.
 - The timber roof framing above the eastern side of the building and the ceiling framing above a section of the western side are charred from fire, albeit they appeared to be in serviceable condition. Refer to Photographs 14 and 15 Appendix C.
 - The ceiling insulation is generally very poorly laid, there is extensive possum faeces above the insulation, and there is rubbish above the ceiling of the Baby's Room. Refer to Photographs 16 to 18 Appendix C.
- 3.5 Our inspection of the First Floor walls revealed that textured paint has been used to disguise the old plaster sheet cracking, there was significant movement and cracking in the ceiling above the southern stair, and minor cracking and movement elsewhere. It should be noted that it is not unusual for First Floor timber walls that are supported by timber beams (rather than brickwork walls) to crack over time as the timber deflects. Refer to Photographs 19 to 22 Appendix C.

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- 3.6 Our inspection of the exterior brickwork walls revealed a fretted terracotta floor vent and some missing mortar at the base of the northern wall most probably due to rising damp, some minor stepped brickwork cracking in the northern wall gable, render and concrete spalling from the concrete lintel located in the southern wall, and some brickwork movement at the eastern end of the southern wall. Refer to Photographs 23 to 26 Appendix C. Notwithstanding the brickwork was generally in very good condition.
- 3.7 Our inspection of the exterior of the building also revealed that the sunshade that has been installed along the eastern side of the building has been connected to the exposed timber framing. Refer to Photographs 27 to 30 Appendix C.

4 Discussion and Recommendations

Our discussion of the issues identified by our inspection and our recommendations follow:-

- 4.1 Although the Ground Floor sub-floor structure that was able to be inspected appears to be fit-for-purpose for the current loadings, we would recommend that the floor levels are monitored for long term settlement of the timber stumps, given the probable dry rot in the bases of the timber stumps. We would also recommend that if the loadings were to be increased then the load capacity of the sub-floor structures are investigated.
- 4.2 Although the First Floor floor structure that was able to be inspected appears also to be fit-for-purpose for the current loadings, we would also recommend that if the loadings were to be increased then the load capacity of the floor structures are investigated. It should be noted that overloading of the First Floor floor structures may lead to cracking in the ground floor ceilings in the first instance.
- 4.3 We would recommend that the long term movement and cracking in the ceiling above the southern stair be investigated by either cutting a hole in the ceiling or removing the roofing over.
- 4.4 We would recommend that the brickwork cracking and movement is repointed and then monitored for ongoing movement.
- 4.5 We would recommend that the southern wall concrete lintel is inspected from an EWP, the loose concrete is removed and the concrete is then remediated.
- 4.6 We would recommend that the condition of the brickwork wall ties are investigated via the removal of a small area of the outer skin of brickwork, noting that the building is reasonably close to the Bay.
- 4.7 We would recommend that the efficacy of the damp proof course of the northern wall, at the fretted terracotta vent, be investigated.

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- 4.8 We would recommend that the sub-floor ventilation is improved.
- 4.9 We would recommend that Council engage a Hygienist to report on the possum faeces within the roof space.
- 4.10 We would recommend that the rubbish and faeces is removed from the roof space, the insulation is re-laid and that it would also be prudent to have the electrical wiring checked by a Licensed Electrician.
- 4.11 We would recommend that Council engage a Structural Engineer to check the adequacy of the sunshade fixings, noting that they can be subjected to extremely high loadings during extremely windy conditions.

5 Conclusion

In conclusion our structural engineering inspection of the Eildon Road Childcare & Kindergarten building revealed that whilst in general the building is in good structural condition there are some structural and other issues that require attention.

We trust that the above is explanatory enough for your purposes and please do not hesitate to contact us on 9381 1239 or 0417 36 34 32 if you have any queries or require further information.

Yours faithfully,

Mark Hodkinson Pty Ltd

Mark Hodkinson

Consulting Structural Engineer
BE(Civil) Grad Dip Struct Comps MIE(Aust) CPEng NER M.ICOMOS RPE

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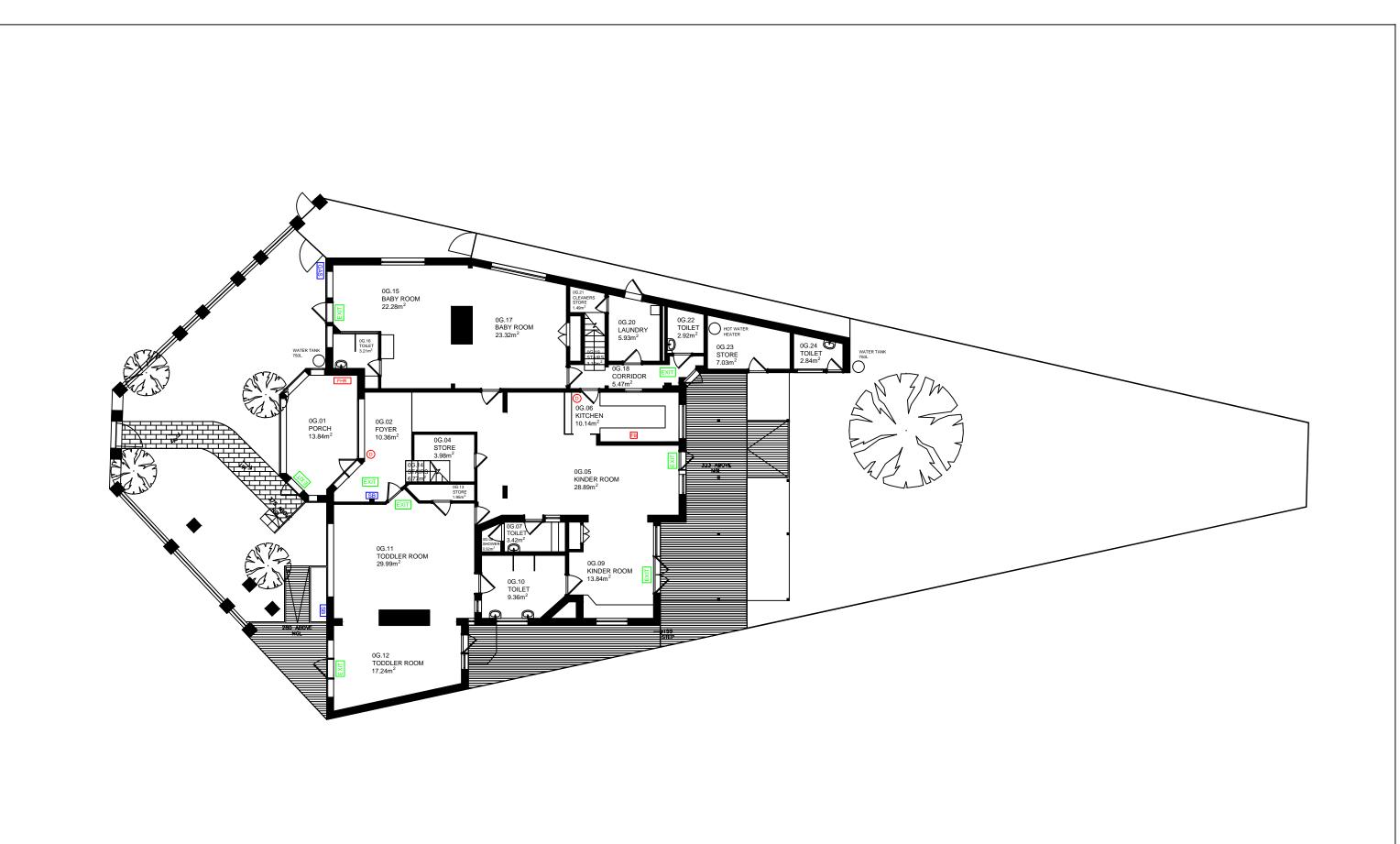
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APPENDIX A

FLOOR PLANS

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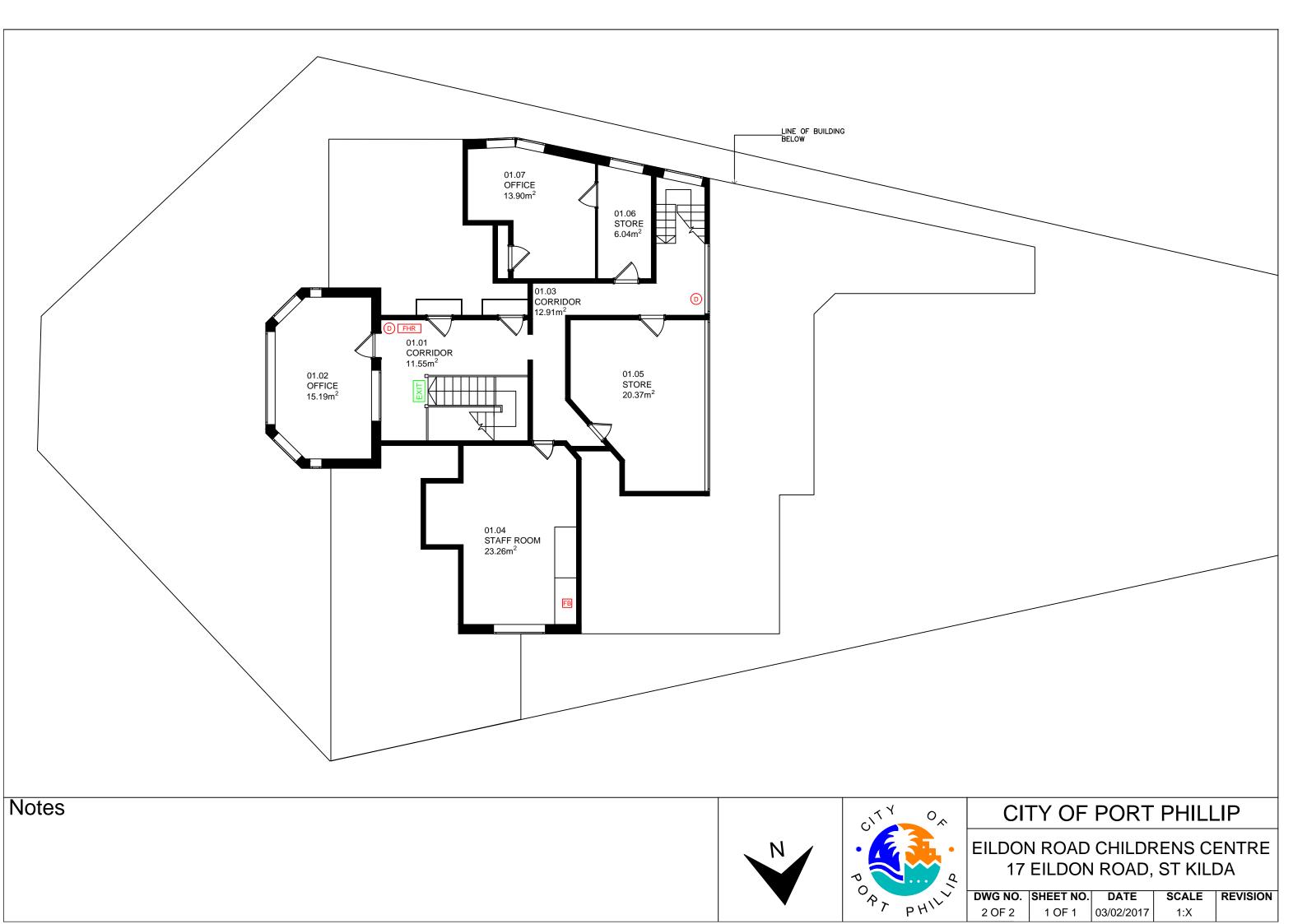


Notes

CITY OF PORT PHILLIP

EILDON ROAD CHILDRENS CENTRE 17 EILDON ROAD, ST KILDA

DWG NO.	SHEET NO.	DATE	SCALE	REVISION
1 OF 2	1 OF 1	02/02/2017	1:X	



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APPENDIX B

FAÇADE AND ROOM PHOTOGRAPHS

APPENDIX B

Photograph 1

A view of the eastern façade of the building.



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APPENDIX B

Photograph 2

A view of the western façade of the building.



APPENDIX B

Photograph 3

A view of the northern façade of the building.



APPENDIX B

Photograph 4

A view of the small Store Room that is located at the southern end of the building.



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APPENDIX B

Photograph 5

A view of the large Store Room that is located along the western side of the building.



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APPENDIX B

Photograph 6

A view of the Office that is located at the southern end of the building.



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APPENDIX B

Photograph 7

A view of the small Office that is located at the eastern side of the building.



APPENDIX B

Photograph 8

A view of the Staff Room that is located at the northern end of the building.



APPENDIX B

Photograph 9

A view of the landing at the top of the southern stair.



APPENDIX B

Photograph 10

A view of the landing at the top of the eastern main stair.



APPENDIX B

Photograph 11

A view of the hallway leading to the Staff Room.



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APPENDIX C

INSPECTION PHOTOGRAPHS

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APPENDIX C

Photograph 1

A part view of one room of the Baby's Room.



APPENDIX C

Photograph 2

A view of the Baby's Room sub-floor structure showing a HW bearer and joists.



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APPENDIX C

Photograph 3

A view of the Baby's Room sub-floor structure showing the 'new' concrete stump, the water staining at the base of a timber stump and where the timber has split off the HW bearer.



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Photograph 4

A part view of one room of the Toddler's Room.



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APPENDIX C

Photograph 5

A view of the Toddler's Room sub-floor structure showing the HW bearers, joists and stumps.



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APPENDIX C

Photograph 6

A view of a Toddler's Room HW stump showing the water staining at the base of the 'original' and 'new' stumps.



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APPENDIX C

Photograph 7

A view of a Toddler's Room HW stump showing the water staining at the base of an 'original' stump and the building debris.



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APPENDIX C

Photograph 8

A view of the HW bearers and joists, a brickwork pier and HW stump, at the southern end of the Kinder Room.



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APPENDIX C

Photograph 9

A view of the debris at the southern end of the Kinder Room.



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APPENDIX C

Photograph 10

A view of the debris at the northern end of the Kinder Room. Note the water staining at the base of the HW stump.



APPENDIX C

Photograph 11

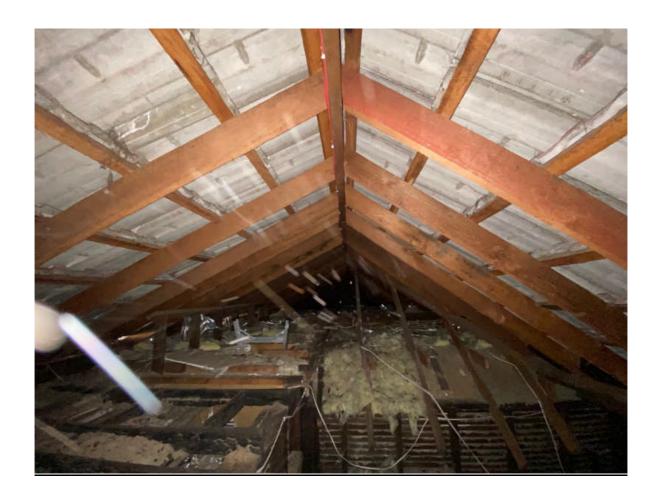
A view of the base brickwork mould and ad hoc HW stump.



APPENDIX C

Photograph 12

A view of the roof structure above the southern end of the building.



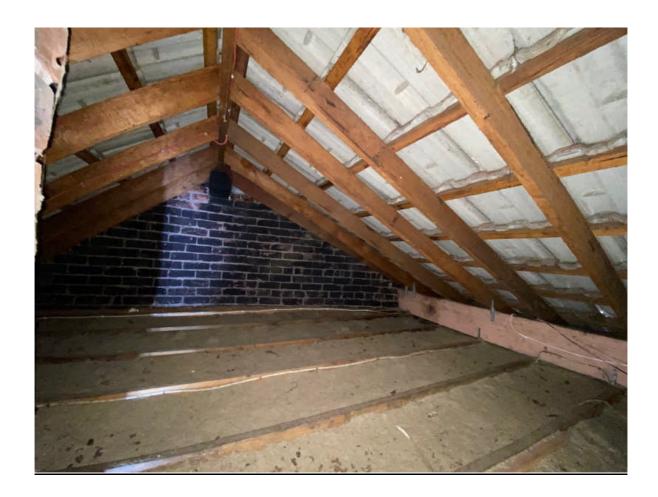
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APPENDIX C

Photograph 13

A view of the roof structure above the northern end of the building.



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APPENDIX C

Photograph 14

A view of the roof structure above the eastern side of the building showing the 'black' fire charred roofing timbers.



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APPENDIX C

Photograph 15

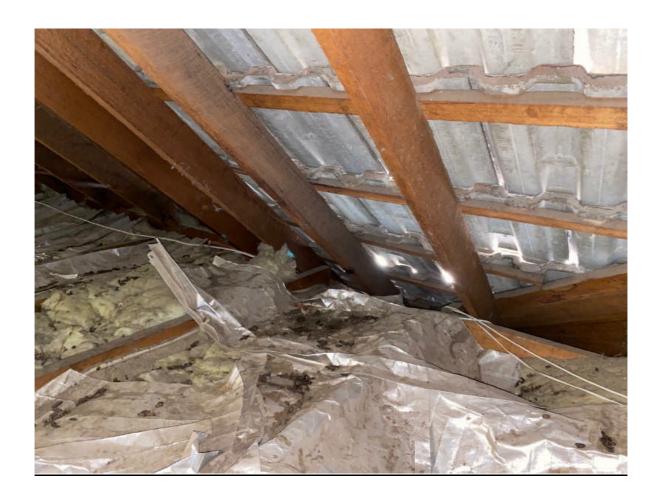
A view of the ceiling structure above the western side of the building showing the 'black' fire charred ceiling timbers.



APPENDIX C

Photograph 16

A view of the poorly laid insulation and possum faeces.



APPENDIX C

Photograph 17

Another view of the poorly laid insulation and possum faeces.



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APPENDIX C

Photograph 18

A view of the poorly laid insulation, rubbish and possum feces above the Baby's Room ceiling.



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Photograph 19

A view of the textured paint used to disguise the old plaster sheet cracking.



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APPENDIX C

Photograph 20

A view of the movement and cracking in the southern stair ceiling.



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APPENDIX C

Photograph 21

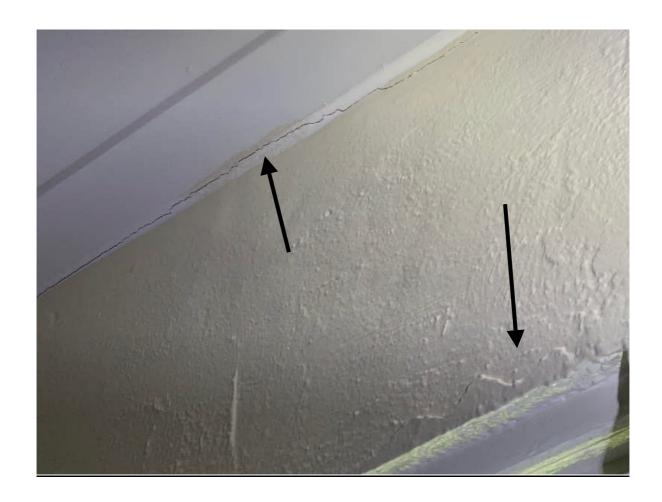
A view of the cracking in the wall to the north of the southern stair.



APPENDIX C

Photograph 22

A view of minor new cracking and old patching.



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APPENDIX C

Photograph 23

A view of the fretted terracotta floor vent and missing mortar.



APPENDIX C

Photograph 24

An oblique view of the stepped brickwork cracking in the northern gable.



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APPENDIX C

Photograph 25

A view of the southern wall concrete lintel showing the render and concrete spalling.



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APPENDIX C

Photograph 26

A view of the brickwork movement at the eastern end of the southern wall.



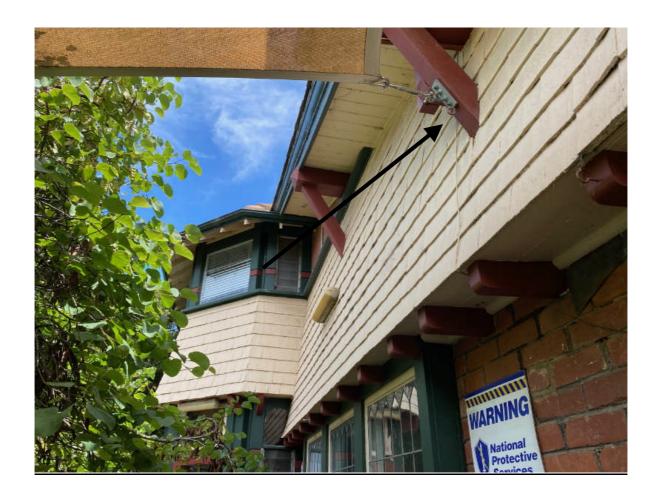
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APPENDIX C

Photograph 27

A view of the eastern sunshade connection to the timber bracket.



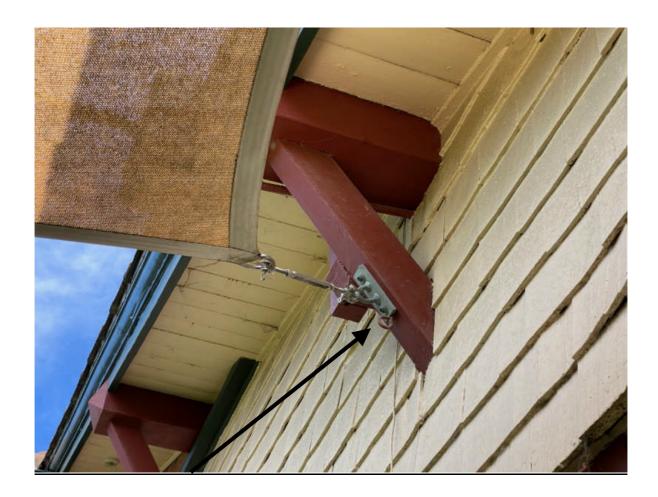
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APPENDIX C

Photograph 28

A close up view of the eastern sunshade connection to the timber bracket.



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Photograph 29

A view of the eastern sunshade connection to the timber fascia.



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APPENDIX C

Photograph 30

A view of the eastern sunshade connection to a timber rafter end.

